
INSTALLING OR REPLACING A TAPE DRIVE IN THE EXABYTE 110L AUTOLOADER, 221L LIBRARY, OR 221L-FC LIBRARY

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REVISION HISTORY

000	November 2000	Initial release.
001	September 2003	Updated to include installing LTO Ultrium Fibre Channel tape drives in the 221L-FC library.

1 BEFORE YOU BEGIN

These field instructions describe how to install or replace a tape drive in an Exabyte® 110L LTO™ Ultrium™ Autoloader, 221L LTO Ultrium Library, or 221L-FC LTO Ultrium Library. This procedure involves the following steps:

- ▶ Removing the drive bay service access cover (if you are installing a second tape drive in the 221L or 221L-FC)
- ▶ Removing the existing tape drive (if you are replacing a tape drive)
- ▶ Installing the new tape drive
- ▶ Resuming operation

Note: The illustrations in these instructions show the 221L and 221L-FC libraries. The component locations for the 110L autoloader are similar to the 221L library.

CONTENTS OF THE TAPE DRIVE KIT

The tape drive kit contains one of the following LTO Ultrium tape drives pre-installed in a drive carrier:

- ▶ SCSI LTO Ultrium 1
- ▶ SCSI LTO Ultrium 2
- ▶ Fibre Channel LTO Ultrium 1
- ▶ Fibre Channel LTO Ultrium 2

! Important

If you are upgrading a 221L library from SCSI to Fibre Channel or from Fibre Channel LTO Ultrium 1 to Fibre Channel LTO Ultrium 2, contact Exabyte Technical Support (1-303-417-7792) to determine whether your library needs additional hardware upgrades.

PREPARING FOR REPLACEMENT

1. Obtain a #2 Phillips screwdriver.
2. Ensure that the environment is free of conditions that could cause electrostatic discharge (ESD). If possible, use an antistatic mat and grounded static protection wristband during installation. If a mat and wristband are not available, touch a known grounded surface, such as a computer's metal chassis.

! Important

Before powering off the library or autoloader, make sure it is not communicating across the SCSI bus. Powering off the library or autoloader may disrupt communication on the SCSI bus.

3. Power off the library or autoloader and disconnect the power cord.

! Important

Before performing this procedure, be sure that the power switch is in the off position and the power cord is disconnected from the outlet.

2 REMOVING THE SERVICE ACCESS COVER (221L OR 221L-FC)

If you are installing an additional tape drive in the 221L or 221L-FC library, follow these steps to remove the drive bay service access cover. If you are replacing a tape drive, skip to the following section, "[Removing the Tape Drive](#)."

1. From the back panel, use a #2 Phillips screwdriver to release the captive screw that secures the service access cover to the library (see [Figure 1](#)).
2. When the screw is loosened, remove the service access cover, as shown in [Figure 1](#).

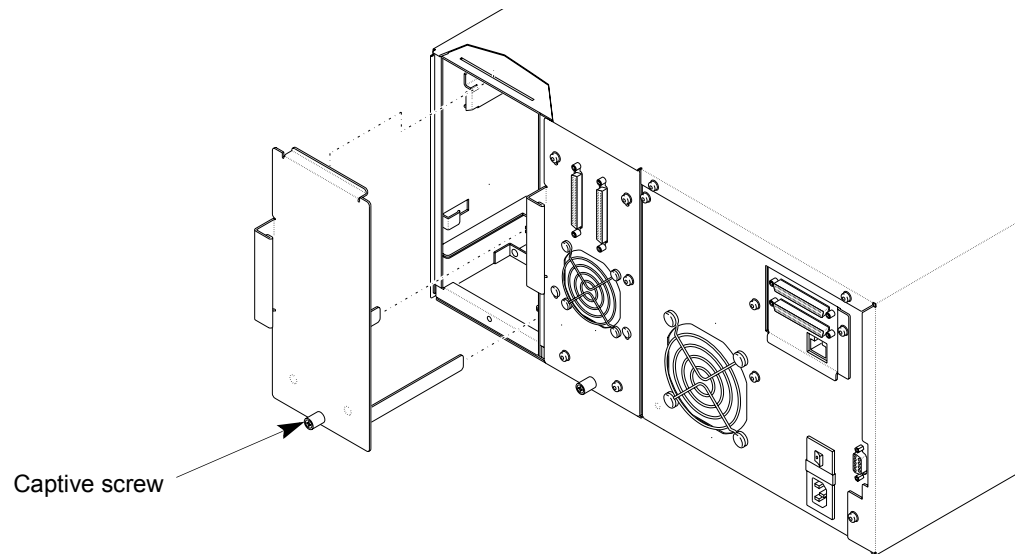


Figure 1 Removing the drive access cover

3 REMOVING THE TAPE DRIVE

If you are replacing an existing tape drive, follow these steps to remove the drive:

1. Disconnect the cable(s) and terminator, if present, from the back of the tape drive you are replacing. The connectors for the tape drives are accessible from the back panel (see [Figure 2](#) for the 221L connectors and [Figure 3](#) for the 221L-FC connectors).

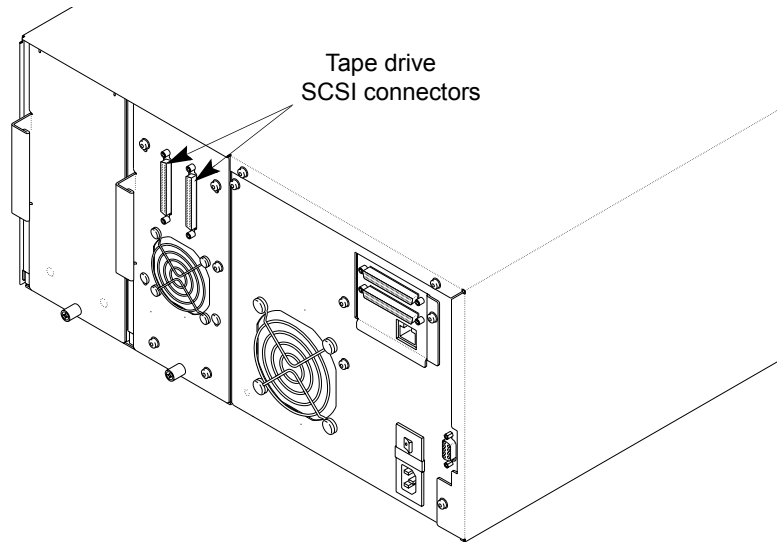


Figure 2 Tape drive SCSI connectors the 221L library

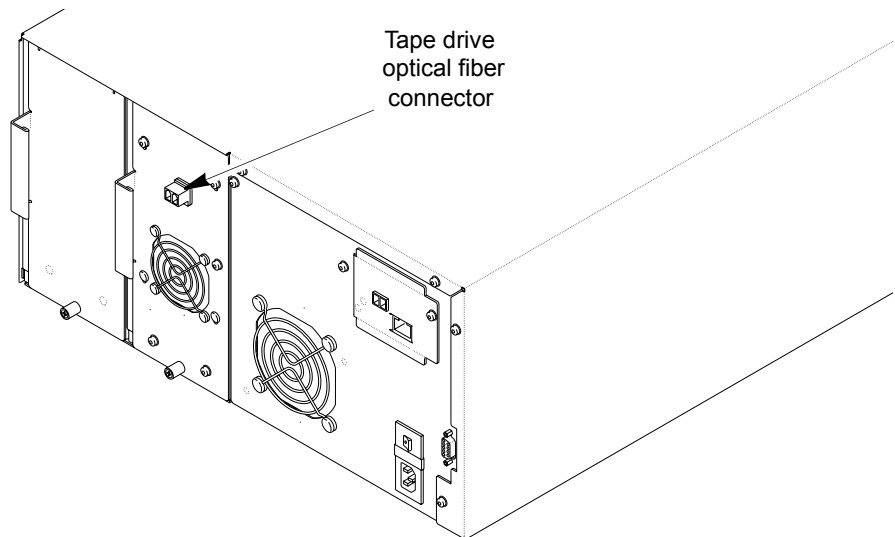


Figure 3 Tape drive Fibre Channel connector on the 221L-FC library

2. From the back panel, use a #2 Phillips screwdriver to release the captive screw that secures the tape drive carrier to the library or autoloader (see [Figure 4](#)).

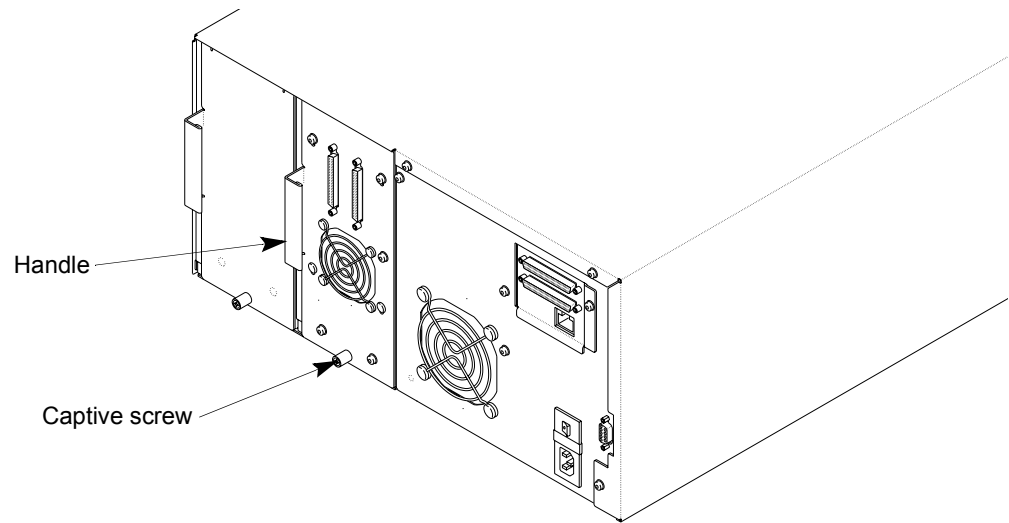


Figure 4 *Loosening the captive screw securing the tape drive to the library (221L shown)*

3. Remove the drive carrier by grasping the handle and pulling it directly out.

! Important

The drive carrier weighs 4.5 kg (10 pounds); make sure you support the bottom of the carrier as you remove it.

4 INSTALLING THE NEW TAPE DRIVE

1. Insert the tape drive so that the handle is at the left and the fan is at the bottom, as shown in [Figure 5](#). The tape drive should slide easily toward the front of the library.

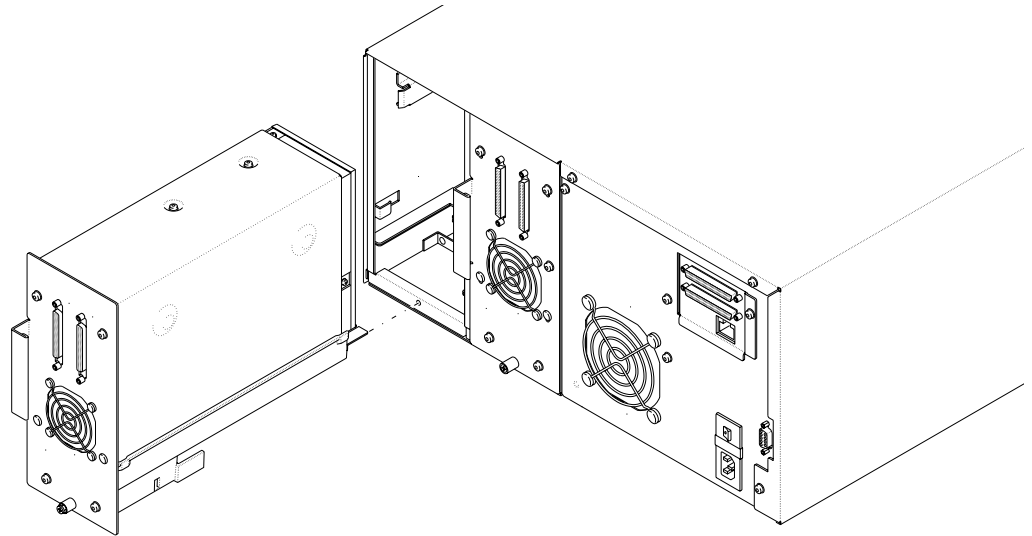


Figure 5 Sliding a tape drive into the library (221L shown)

2. Tighten the captive screw to 8.0 inch-pounds (9.2 kg-cm) of torque.
3. Connect the cable(s) and terminator, if used, to the new tape drive.

Note: If you are installing an additional tape drive in the 221L or 221L-FC, refer to the *221L and 221L-FC Product Manual* for information about connecting to SCSI or Fibre Channel.



Caution

To avoid damaging the tape drive, make sure the library or autoloader is powered off when you connect it to the SCSI bus.

4. Reconnect the power cord and power on the library or autoloader. Calibration of the new tape drive occurs automatically during power on.

! Important

Do not power on the 221L or 221L-FC library with an empty drive bay. Each drive bay must have either a tape drive or a service access cover.

5 RESUMING OPERATION

The library or autoloader is now ready to resume operation. If you replaced a SCSI tape drive, the new tape drive automatically assumes the SCSI ID of the old drive. If you installed an additional SCSI tape drive in the 221L, set the SCSI ID for the drive as described in the *221L and 221L-FC Product Manual*.

If you installed or replaced a Fibre Channel tape drive in the 221L-FC, refer to the *221L and 221L-FC Product Manual* for information about setting the tape drive's Loop ID.

You may want to perform some hardware exercises to ensure that the library and the newly installed tape drive are communicating correctly. See the *221L and 221L-FC Product Manual* for instructions.

IF PROBLEMS OCCUR...

If your library or autoloader does not resume normal operation after calibration, check the following:

110L and 221L	221L-FC
▪ Are the devices on each SCSI bus attached to the autoloader or library all LVD? ▪ Are the SCSI buses terminated? ▪ Are the SCSI cables firmly connected to the autoloader or library, tape drive(s) and host computer? ▪ Are the SCSI IDs unique for the devices on each SCSI bus? ▪ Have you connected more than two tape drives to the same SCSI bus? For best performance, avoid connecting more than two LTO tape drives to the same bus. ▪ Is the library or autoloader operating in the correct control mode? (For most applications, the control mode should be set to SCSI.)	▪ Are the GBICs and cables used to connect the tape drives to the Fibre Channel loop compatible? ▪ Are the Fibre Channel cables firmly connected to the library, tape drives, and the Fibre Channel hub or switch? ▪ Is the library operating in the correct control mode? (For most applications, the control mode should be set to SCSI.)

If you cannot solve the problem yourself, contact your service provider or Exabyte Technical Support (1-303-417-7792).